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LETTER TO THE EDITOR

"Letter to the Editor" concerning the article: Adolescent idiopathic scoliosis treated with posteromedial translation: radiologic evaluation with a 3D low-dose system. Ilharreborde B, Sebag G, Skalli W, Mazda K (2013) Eur Spine J. Apr 12. 10.1007/s00586-013-2910-6

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We compliment Ilharreborde and colleagues [1] on the publication of their article "Adolescent idiopathic scoliosis treated with posteromedial translation: radiologic evaluation with a 3D low-dose system" (Eur Spine J, 2013 Apr). We enjoyed reading the paper, and the EOS® images particularly captured our attention. In cases of severe scoliosis, it is difficult to prevent capturing the facial skeleton. This part of the body might not be the focus of an orthopaedist or orthopaedic surgeon, but the quality of the lateral and anteroposterior acquisition is sufficiently precise for an objective evaluation of the facial skeleton. To predict the facial growth pattern of a child or young adult and asymmetries or displaced/missing teeth, not only lateral but in some cases also anteroposterior radiographs need to be taken. Even small dosages of radiation to the patient will accumulate through a lifetime and should be avoided if possible. The recent and controversial paper published by Claus et al. [2] stated that exposure to dental X-rays in past decades, when radiation exposure was greater than in the current era, appeared to be associated with an increased risk of intracranial meningioma. As patients with scoliosis require spinal imaging, orthodontists can take advantage for the diagnosis and treatment planning of jaw asymmetry as well. Orthodontists have taken specific interest in adolescent idiopathic scoliosis, reporting that children affected by scoliosis have more malocclusions [3]. Facial asymmetry can include a distortion of the entire face, and it appears that there is some relationship between facial asymmetry and adolescent idiopathic scoliosis [3]. In the paper published by Ben-Bassat et al. [4] in about 103 patients with idiopathic scoliosis who were clinically examined by a spine surgeon and an orthodontist, the frequency distribution of the various occlusal variables was compared with that in a control group of 705 random, school-aged children for whom identical occlusal parameters had been examined previously. It was found that patients with idiopathic scoliosis had more asymmetric features of malocclusion in comparison with the control group [4]. With this background information, we recommend that EOS® images be forwarded to the attending dentist or orthodontist. Since the EOS® system is increasingly available in hospitals as well as in private practice, there are more patients being "captured" with this sophisticated low-dose device. Therefore, EOS® images can replace an initial facial X-ray, which can help reduce the cumulative radiation for young patients over time.

Conflict of interest None.

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References

1. Ilharreborde B, Sebag G, Skalli W, Mazda K (2013) Adolescent idiopathic scoliosis treated with posteromedial translation: radiologic evaluation with a 3D low-dose system. Eur Spine J. Apr 12. [Epub ahead of print]
2. Claus EB, Calvocoressi L, Bondy ML, Schildkraut JM, Wiemels JL, Wrensch M (2012) Dental X-rays and risk of meningioma. Cancer 118(18):4530–4537

3. Hong JY, Suh SW, Modi HN, Yang JH, Hwang YC, Lee DY, Hur CY, Park YH (2011) Correlation between facial asymmetry, shoulder imbalance, and adolescent idiopathic scoliosis. Orthopedics 34(6):187

4. Ben-Bassat Y, Yitschaky M, Kaplan L, Brin I (2006) Occlusal patterns in patients with idiopathic scoliosis. Am J Orthod Dentofacial Orthop 130(5):629–633